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10/561,855	12/21/2005	Rudolf Johan Maria Vullers	NL 030724	1402

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EXAMINER
KLIMOWICZ, WILLIAM JOSEPH

ART UNIT	PAPER NUMBER
2627	

MAIL DATE	DELIVERY MODE
02/13/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,855

Applicant(s)

VULLERS ET AL.

Examiner

William J. Klimowicz

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishii et al. (EP 1 109 155 A1).

As per claim 1, Ishii et al. (EP 1 109 155 A1) discloses a magneto-optical device comprising a magneto-optical read and/or a write head (1) - e.g., see FIG. 4 - with a coil holder (22) comprising a coil (21), and a means for generating a laser beam, wherein the laser beam is passed through an aperture (h1) in the coil (21) during operation, which coil holder (22) comprises a recess with a recess depth (d) at or around the position of the center of the coil (21), and a lens (23) extends, viewed from the disk (11), behind the coil (21) so as to overlap the coil (21) at least partly.

As per claim 3, characterized in that the coil (21) is positioned in the recess - see FIG. 4.

As per claim 4, characterized in that the depth of the recess (h) is less than twice the free working distance (FWD) (e.g., see COL. 21, lines 30-33, wherein $d \leq 200$ [um]).

As per claim 5, characterized in that the depth of the recess (d) is less than the free working distance (e.g., see COL. 21, lines 30-33, wherein $d \leq 200$ [um]).

As per claim 6, characterized in that the depth of the recess (h) is more than half the free working distance (e.g., see COL. 21, lines 30-33, wherein $d \leq 200$ [um]).

As per claim 7, a read and/or write head (1) presenting all the features of the head disclosed in claim 1 and being thus constructed and evidently intended for use in the magneto-optical device as claimed in claim 1.

Claims 1, 2 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakaoki et al. (EP 0 910 078 A2).

As per claim 1, Nakaoki et al. (EP 0 910 078 A2) discloses a magneto-optical device (25) comprising a magneto-optical read and/or a write head with a coil holder (44, 46) comprising a coil (48), and a means for generating a laser beam, wherein the laser beam is passed through an aperture (47a) in the coil (48) during operation, which coil holder (44, 46) comprises a recess with a recess depth (t) at or around the position of the center of the coil (48) - see FIG. 11 - and a lens (41 and/or 42) extends, viewed from the disk (2), behind the coil (48) so as to overlap the coil (48) at least partly - e.g. see FIG. 6.

As per claim 2, characterized in that the recess is restricted to an area within the aperture in the coil (48) - see FIG. 7, 11.

As per claim 7, a read and/or write head (25) presenting all the features of the head disclosed in claim 1 and being thus constructed and evidently intended for use in the magneto-optical device as claimed in claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakaoki et al. (EP 0 910 078 A2).

See the description of Nakaoki et al. (EP 0 910 078 A2), *supra*.

As per claims 4-6, although Nakaoki et al. (EP 0 910 078 A2) does not explicitly state in a quantitative and exact numerical range, the manner in which the depth of the recess (t) to the working distance is mathematically related, Nakaoki et al. (EP 0 910 078 A2) clearly teaches reasons for why one of ordinary skill in the art would desire to provide the ranges of the depth of the recess to the free working distance, as set forth in claims 4-6 - e.g., see, *inter alia*, FIG. 11 and paragraph [0151] *et seq.*

That is, given the express teachings and motivations, as espoused by Nakaoki et al. (EP 0 910 078 A2), it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the depth of the recess in relation to the working distance as being: the depth of the recess is less than twice the free working distance (FWD) (as per claim 4); the depth of the recess is less than the free working distance (as per claim 5); the depth of the recess (h) is more than half the free working distance (as per claim 6).

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the depth of the recess in relation to the working distance as being: the depth of the

recess is less than twice the free working distance (FWD) (as per claim 4); the depth of the recess is less than the free working distance (as per claim 5); the depth of the recess (h) is more than half the free working distance (as per claim 6) since Nakaoki et al. (EP 0 910 078 A2) expressly teaches that providing a such a depth (t) to working distance (WD) range allows the device to “evade collision between the magneto-optical head unit 25 and the magneto-optical disc 2.” See paragraph [0151].

Additionally, the law is replete with cases in which when the mere difference between the claimed invention and the prior art is some range, variable or other dimensional limitation within the claims, patentability cannot be found.

It furthermore has been held in such a situation, the Applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Moreover, the instant disclosure does not set forth evidence ascribing unexpected results due to the claimed dimensions. See *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338 (Fed. Cir. 1984), which held that the dimensional limitations failed to point out a feature which performed and operated any differently from the prior art.

Moreover still, with regard to claims 4-6, although Nakaoki et al. (EP 0 910 078 A2) remains silent with respect to the particular claimed ranges, given the teachings and suggestions of Nakaoki et al. (EP 0 910 078 A2) for providing a magneto-optical head for close proximity to a disc, it would have been within the skill of one having ordinary skill in the art to routinely modify the spatial distances of then head to disc in the course of routine

optimization/experimentation and thereby obtain various standard optimized relationships including those set forth in claims 4-6 as nothing more than a ***predictable variation*** based the on the overarching teachings of Nakaoki et al. (EP 0 910 078 A2).

That is, given the express conceptual teachings and implied/inferred suggestions of Nakaoki et al. (EP 0 910 078 A2) as a whole, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to routinely modify the unit of Nakaoki et al. (EP 0 910 078 A2) in the course of routine optimization/experimentation and thereby obtain various standard optimized relationships including those set forth in claims 4-6 in order to arrive at a prescribed recess depth to working distance ratio which would satisfactorily provide the desired and advantageous results of Nakaoki et al. (EP 0 910 078 A2) and thus provide nothing more than a ***predictable variation*** based the on the overarching and pertinent teachings of Nakaoki et al. (EP 0 910 078 A2).

Additionally, the law is replete with cases in which when the mere difference between the claimed invention and the prior art is some range, variable or other dimensional limitation within the claims, patentability cannot be found.

It furthermore has been held in such a situation, the Applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Moreover, the instant disclosure does not set forth evidence ascribing unexpected results due to the claimed dimensions. See *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338 (Fed. Cir.

1984), which held that the dimensional limitations failed to point out a feature which performed and operated any differently from the prior art.

Additionally, the following 35 USC 103(a) rejections are being made in light of a recent Supreme Court opinion.

The Supreme Court has issued its opinion in *KSR*, regarding the issue of obviousness under 35 U.S.C. 5 103(a) when the claim recites a combination of elements of the prior art. *KSR Int'l Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007).

In the decision, the Court reaffirmed the Graham factors in the determination of obviousness under 35 U.S.C. 5 103(a), inclusive of the four factual inquiries under Graham, which are:

- (a) determining the scope and contents of the prior art;
- (b) ascertaining the differences between the prior art and the claims in issue;
- (c) resolving the level of ordinary skill in the pertinent art; and
- (d) evaluating evidence of secondary consideration.

Graham v. John Deere, 383 U.S. 1, 17-18, 148 USPQ 459,467 (1966).

It is noted that the Court did not totally reject the use of “teaching, suggestion, or motivation” as a factor in the obviousness analysis. Rather, the Court recognized that a showing of “teaching, suggestion, or motivation” to combine the prior art to meet the claimed subject matter could provide a helpful insight in determining whether the claimed subject matter is obvious under 35 U.S.C. 103(a).

More noteworthy, however, the Court rejected a rigid application of the “teaching, suggestion, or motivation” (TSM) test, which required a showing of some teaching, suggestion,

or motivation in the prior art that would lead one of ordinary skill in the art to combine the prior art elements in the manner claimed in the application or patent before holding the claimed subject matter to be obvious.

The Court noted that the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and that it was “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed.

The Court specifically stated:

Often, it will be necessary . . . to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an ***apparent reason*** to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis ***should be made explicit***.

KSR, slip op. at 14 (emphasis added).

No new or unobvious result is seen to be obtained, given the express teachings and motivations, as espoused by Nakaoki et al. (EP 0 910 078 A2), and as such, the claimed ranges are seen, absent any unobvious evidence, as nothing more than a ***predictable variation*** based the on such overarching and pertinent teachings of Nakaoki et al. (EP 0 910 078 A2), in light of the general knowledge of an artisan having ordinary skill in the art, with the express rationale provided *supra*. See *KSR Int’l Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007).

Moreover still, the Supreme Court opined “[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the

same field or a different one. If a person of ordinary skill can implement a *predictable variation*, § 103 likely bars its patentability.” (Emphasis added) 127 S. Ct. 1727, 1740.

The claimed dimension or ranges of the invention, absent any unexpected results, given such a teaching espoused by Nakaoki et al. (EP 0 910 078 A2), would indeed cause one having ordinary skill in the art to find a workable range of particular values for such a desired distance between the optical head and disc surface, while evading collision therebetween, thus verifying the expected transducing characteristics.

The Examiner finds this situation analogous to the optimization of a range or other variable within the claims that flows from the “normal desire of scientists or artisans to improve upon what is already generally known.” *In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003) (determining where in a disclosed set of percentage ranges the optimum combination of percentages lies is *prima facie* obvious). In *In re Aller*, 220 F.2d 454, 456 (C.C.P.A. 1955), it was held that the discovery of an optimum value of a variable in a known process is usually obvious. See also *In re Boesch*, 617 F.2d 272, 276 (C.C.P.A. 1980) (“[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art.”); *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (“[I]t is not inventive to discover the optimum or workable ranges by routine experimentation.” (quoting *Aller*, 220 F.2d at 456)); *In re Kulling*, 897 F.2d 1147, 1149 (Fed. Cir. 1990) (finding no clear error in Board of Patent Appeals and Interferences’ conclusion that the amount of eluent to be used in a washing sequence was a matter of routine optimization known in the pertinent prior art and therefore obvious).

Based on the teachings of Nakaoki et al. (EP 0 910 078 A2), and the skill of one having ordinary skill in the art, the Examiner maintains that the experimentation needed, then, to arrive at the particular claimed ranges in the instant application, is “nothing more than routine” application of a well-known problem-solving strategy, *Merck & Co., Inc. v. Biocraft Labs., Inc.*, 874 F.2d 804, 809 (Fed. Cir. 1989), and the Examiner concludes this is, “the work of a skilled [artisan], not of an inventor.” *DyStar*, 464 F.3d at 1371; see also *In re Luck*, 476 F.2d 650, 652-53 (C.C.P.A. 1973) (use of routine testing to identify optimum amounts of silane to be employed in a lamp coating, without establishing a critical upper limit or demonstrating any unexpected result, lies within the ambit of the ordinary skill in the art); *In re Esterhoy*, 440 F.2d 1386, 1389 (C.C.P.A. 1971) (“One skilled in the art would thus manifestly operate the Switzer et al. process under conditions most desirable for maximum and efficient concentration of the acid. The conditions recited in the claims appear to us to be only optimum and easily ascertained by routine experimentation.”); *In re Swentzel*, 219 F.2d 216, 219 (C.C.P.A. 1955) (“It may well be that the size represents the largest particles suitable for appellant’s purpose, but the determination of that desired size under the present circumstances involves nothing more than routine experimentation and exercise of the judgment of one skilled in the art.”); *In re Swain*, 156 F.2d 246, 247-48 (C.C.P.A. 1946) (“In the absence of a proper showing of an unexpected and superior result over the disclosure of the prior art, no invention is involved in a result obtained by experimentation.”); “the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success.” *Merck*, 874 F.2d at 809 (quoting *In re Dow Chem. Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988)).

For these reasons, the Examiner is of the opinion, based on a preponderance of the evidence, in conjunction with analogous case law, a skilled artisan would have had a reasonable expectation of success with the modification of Nakaoki et al. (EP 0 910 078 A2) (assuming *arguendo* that Nakaoki et al. (EP 0 910 078 A2) does not anticipate such claimed ranges), to arrive at the prescribed recess depth to working distance ratios as prescribed by claims 4-6. Moreover, it is worth noting that Nakaoki et al. (EP 0 910 078 A2) certainly does not teach away from the claimed ranges. Thus, it is the opinion of the Examiner that a requisite *prima facie* case of obviousness has been established with regard to the claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

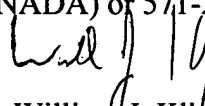
Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (571) 272-7577. The examiner can normally be reached on Monday-Friday (7:30AM-6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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William J. Klimowicz
Primary Examiner
Art Unit 2627

WJK